## SEQUENCE LISTING

<110> Simmons, Carl R.

<120> Nucleic Acids	Encoding	Defense	Inducible
Proteins and Uses	Thereof		

<130> 35718/242990 <141> 02/28/2002 <150> 60/272,227 <151> 02/28/2001 <160> 25 <170> FastSEQ for Windows Version 4.0 <210> 1 <211> 676 <212> DNA <213> Zea mays <220> <221> CDS <222> (89)...(367) <400> 1 acccacgcgt ccgcccacgc gtccgcagca atccacacaa gcacttcgaa ggaccactgc 60 teggaggaca caccaagegt etgeacea atg get tac tac eag gag gtg gae 112 Met Ala Tyr Tyr Gln Glu Val Asp tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc ttc ggc cgc 160 Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly Phe Gly Arg 10 cac ggc ggc gtc cag cag cac gtc gtc aag gag aag ttc gag gag 208 His Gly Gly Gly Val Gln Gln His Val Val Lys Glu Lys Phe Glu Glu 25 gtc gac acg gta tca cgc gcc gcc aac cac cac cac cat ggt 256 Val Asp Thr Val Ser Arg Ala Gly Ala Asn His His His His Gly 45 cac cac ggc ggc cac ggc ttc gtg gtg cgc gag acc agg gtc gag gag 304 His His Gly Gly His Gly Phe Val Val Arg Glu Thr Arg Val Glu Glu 65 gac atc aac acc tgc acc ggc gag gtc cac gag cgc agg gag agc ttc 352 Asp Ile Asn Thr Cys Thr Gly Glu Val His Glu Arg Arg Glu Ser Phe 75 80

ctc gcc agg gct aac tgagccgccc ggcggccggc atccacgccc gttcgtgctt Leu Ala Arg Ala Asn 90	407
gcctgcgtgc cttatgtatg tctgtggttg actggttgtg cagggtcatc gtacttggct atcgtacgtg cacgcactca gctcctgtac gaattacgac aataagctcg tgacctgaat aaaacttctt cgtaatacta atacctacat caaaaaaaaa aaaaaaaaa	467 527 587 647 676
<210> 2 <211> 93 <212> PRT <213> Zea mays	
<400> 2	
Met Ala Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser  1 5 10 15	
Val Ala Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln His	
20 25 30  Val Val Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ser Arg Ala Gly 35 40 45	
Ala Asn His His His His Gly His His Gly His Gly Phe Val	
50 55 60  Val Arg Glu Thr Arg Val Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu 65 70 75 80	
Val His Glu Arg Arg Glu Ser Phe Leu Ala Arg Ala Asn 85 90	
<210> 3 <211> 574 <212> DNA	
<213> Zea mays	
<220>	
<221> CDS <222> (96)(374)	
<400> 3	
acceaegegt eegeceaege gteegeaeag caateeaeac aageaetteg aegteaeaeg	60
ggcgctgcgc acagacacac caagcgtcgg cacca atg gct tac tac cag gag Met Ala Tyr Tyr Gln Glu 1 5	113
gtg gac tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc ttc	161
Val Asp Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly Phe 10 15 20	161
ggc cgc cac ggc ggc ggc gtc cag cac gtc gtc aag gag aag ttc	209
Gly Arg His Gly Gly Val Gln Gln His Val Val Lys Glu Lys Phe 25 30 35	
gag gag gtc gac acg gtc tca cgc gcc ggc gcc aac cac cac cac	257
Glu Glu Val Asp Thr Val Ser Arg Ala Gly Ala Asn His His His 40	

cat ggt cac cac ggc ggc cac ggc ttc gtg gtg cgc gag acc agg His Gly His His Gly Gly His Gly Phe Val Val Arg Glu Thr Arg 55 60 65	g gtc 305 g Val 70
gaa gag gac atc aac acc tgc acc ggc gag gtc cac gag cgc agg Glu Glu Asp Ile Asn Thr Cys Thr Gly Glu Val His Glu Arg Arg 75 80	Glu
agc ttc ctc gcc agg gct aac tgagccgccc ggcggccggc atccacgcc Ser Phe Leu Ala Arg Ala Asn 90	c 404
gttcgtgctt gcctgcgtgc cttatgtatg tctgtggttg actggttgtt cagg gtacttggct atcgtacgtg cacgcactca gctcctgtac gaattacgac aata tgacctgaat aaaacttctt cgtaatacta aaaaaaaaa aaaaaaaaa	gtcatc 464 agctcg 524 574
<210> 4 <211> 93 <212> PRT <213> Zea mays	
<400> 4	
Met Ala Tyr Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg  1 5 10 15	
Val Ala Pro Ala Gly Phe Gly Arg His Gly Gly Gly Val Gln Gln 20 25	
Val Val Lys Glu Lys Phe Glu Glu Val Asp Thr Val Ser Arg Ala	Gly
Ala Asn His His His His Gly His His Gly Phe	Val
Val Arg Glu Thr Arg Val Glu Glu Asp Ile Asp Thr Cvs Thr Gly	
65 70 75  Val His Glu Arg Arg Glu Ser Phe Leu Ala Arg Ala Asn	80
85 90	
<210> 5	
<211> 577	
<212> DNA <213> Zea mays	
<220>	
<221> CDS	
<222> (99)(377)	
<400> 5	
tegacecaeg egteegeeca egegteegea eageaateea eacaageaet tegaceaeggegetg egeacagaea eaceaagegt eggeaeea atg get tae tae eag	gtcac 60
Met Ala Tyr Tyr Gli 1	g gag 116 n Glu
gtg gac tac tgc tcg gag gag gtg agg tcg gtg gcc ccg gcc ggc t Val Asp Tyr Cys Ser Glu Glu Val Arg Ser Val Ala Pro Ala Gly F 10 15 20	ctc 164 Phe
ggc cgc cac ggc ggc ggc gtc cag cac gtc gtc aag gag aag t Gly Arg His Gly Gly Gly Val Gln Gln His Val Val Lys Glu Lys F 25 30 35	tc 212 Phe

Glu	g gag i Glu 40	val	Asp	t acc	g gtc Val	Ser 45	cgc Arg	gcc	ggc Gly	gco Ala	aac Asn 50	Hi	c cae s Hi	c cad s His	c cac s His	260
cat His 55	, GI	cac His	cac His	ggc	ggc Gly 60	cac His	ggc Gly	ttc Phe	gtg Val	gtg Val 65	Arg	gag	g aco	c ago	g gtc g Val 70	308
gaa Glu	gag Glu	gac Asp	atc Ile	aac Asn 75	inr	tgc Cys	acc Thr	ggc Gly	gag Glu 80	gtc Val	cac His	gag Glu	g cgo ı Arg	agg Arg 85	g gag g Glu	356
agc Ser	ttc Phe	ctc Leu	gcc Ala 90	agg Arg	gct Ala	aac Asn	tgag	gccg	ccc ·	ggcg	gccg	gc a	itcca	cgcc	c	407
<210 <211 <212	cctga 0> 6 1> 93 2> PF	aat a	aaaa	Lacy	gc ct tg ca tt cg	icgca	ictca	a act	tccto	gtac	gaat	ttac	cac	cagg aata	gtcatc agctcg	467 527 577
	D> 6 Ala	Tvr	Tur	Gln	Glu i	va 1	7 ~~	<b></b>	<b>G</b>							
				5	Glu				10					15		
			20		Phe			25					20			
Val	Val	Lys 35	Glu	Lys	Phe (	Glu	Glu 40	Val	Asp	Thr	Val		Arg	Ala	Gly	
Ala			His	His	His 1			His	His	Gly		45 His	Gly	Phe	Val	
0.5					Val (	Glu (				75			Thr	Gly	Glu 80	
		Olu 1	arg .	85	Glu 8	ser i	Pne l		A1a 90	Arg	Ala	Asn				
<210 <211 <212 <213	> 58 > DN	A	/s													
<220: <221: <222:	> CDS		(380	))												
<400>																
tcgad	ccac	g cg	tccg	gecea	a cgc	gtcc	gca	cago	aato	ca d	cacaa	egca	ct t	cgac	gtcgc	60
acggg	geget	g ca	caca	ıgaca	a cac	caag	cgt	cggc	acca	ı atç	g gct	: ta	c ta	c ca	gtege g gag n Glu	116
gtg g Val A	ac t sp T	ac t yr C	gc t ys S	cg g er G	gag g Slu G	ag g lu V	tg a al A	gg t rg S	cg g er V	tg g al A	jcc c	cg o	gcc q Ala (	ggc t	tc Phe	164

			10	)				15	5				2	0		
ggc Gly	cgo	cac His 25	GIY	ggo Gl	ggc Gly	gto Val	cag Glr 30	Glr	g cad His	c gt	c gto l Val	c aag Lys 35	Gl	g aag u Lys	g ttc s Phe	212
gag Glu	gag Glu 40	rvar	gac Asp	aco Thr	g gtc Val	tca Ser 45	Arg	gcc Ala	ggo Gly	gc Ala	c aac a Asr 50	His	cae His	c cac s His	cac His	260
cac His 55	cat His	ggt	cac His	Cac	ggc Gly 60	GIA	cac His	ggc	tto Phe	gtg Val	l Val	cgc Arg	gag Glu	g acc	agg Arg 70	308
gtc Val	gag Glu	gag Glu	gac Asp	ato Ile 75	Asn	acc Thr	tgc Cys	acc Thr	Gly 80	Glu	g gtc ı Val	cac His	gag	g cgc 1 Arg 85	agg Arg	356
gag Glu	agc Ser	ttc Phe	ctc Leu 90	gcc Ala	agg Arg	gct Ala	aac Asn	tga	gccg	ccc	ggcg	gccg	gc a	ıtcca	cgccc	410
geac	ceg	gcc c	iccy	-acy	ug ca	acge	actc	a qci	cct	qtac	act gaa aaa	ttaco	720	cagg aata	gtcatc agctcg	470 530 580
<210 <211 <212 <213	> 94 > PI		ıys													
<400	> 8															
	_	Tyr	Tyr	Gln 5	Glu	Val	Asp	Tyr	Cys	Ser	Glu	Glu	Val		Ser	
Val 2	Ala	Pro	Ala 20	Gly	Phe	Gly	Arg	His 25		Gly	Gly	Val		15 Gln	His	
Val '	Val	Lys 35	Glu	Lys	Phe	Glu	Glu 40	Val	Asp	Thr	Val	Ser 45	30 Arg	Ala	Gly	
Ala A	Asn 50	His :	His	His	His	His 55		Gly	His	His		Gly	His	Gly	Phe	
Val V 65	/al	Arg (	Glu	Thr	Arg 70	Val	Glu	Glu	Asp	Ile 75	60 Asn	Thr	Cys	Thr		
Glu V	/al	His (	Glu /	Arg 85		Glu	Ser		Leu 90	Ala	Arg	Ala	Asn		80	
<210 > <211 > <212 > <213 >	52 DN	A	/s													
<220><221><222>	CD		(331	L)												
<400> agcgg		gg aa	gaag	ggct	c aca	agat	gaa	gaco	JCaca	aag	gegte	eggea	ac c	a ato	a act	58
										-	-		_		Ala	30

tao Tyi	tac Tyr	cag Gln 5	gag Glu	gtg Val	gac Asp	tac Tyr	tgc Cys 10	Ser	g gag Glu	g gaq ı Glı	g gtg u Val	g agg l Arg	g Sei	g gtg val	gcc Ala	106
Pro	g gcc Ala 20	GIY	ttc Phe	ggc	cgc Arg	cac His 25	ggc Gly	ggc	ggc Gly	gto Val	c cag l Glr 30	ı Glr	g cad n His	gtc Val	gtc Val	154
aag Lys 35	GIU	aag Lys	ttc Phe	gag Glu	gag Glu 40	gtc Val	gac Asp	acg Thr	gtc Val	gca Ala 45	a Arg	geo J Ala	ggo Gly	gcc Ala	aac Asn 50	202
cac His	cac His	cac His	cac His	cat His 55	ggt Gly	cac His	cac His	ggc	ggc Gly 60	Cac	ggc Gly	tto Phe	gtg Val	gtg Val 65	cgc Arg	250
gag Glu	acc Thr	agg Arg	gtc Val 70	gag Glu	gag Glu	gac Asp	atc Ile	aac Asn 75	acc Thr	tgc Cys	acc Thr	ggc	gag Glu 80	Val	cac His	298
gag Glu	cgc Arg	agg Arg 85	gag Glu	agc Ser	ttc Phe	ctc Leu	gcc Ala 90	agg Arg	gct Ala	aac Asn	tga	gcag	ccc	gggc	ggccgg	351
<21: <21: <21:	gtact tgaco 0> 10 1> 93 2> PR 3> Ze	etg e etg a	getag	gcgta	ic gt	gcac	gcad	: tca	ageto	ccta	tac	gaat	tac -	gatas	agggtc ataagc aaaa	411 471 529
<400	)> 10	)														
	Ala		Tyr	Gln 5	Glu	Val	Asp	Tyr		Ser	Glu	Glu	Val		Ser	
	Ala	Pro	Ala 20		Phe	Gly	Arg	His 25	10 Gly	Gly	Gly	Val		15 Gln	His	
Val	Val	Lys 35		Lys	Phe	Glu	Glu	Val	Asp	Thr	Val		30 Arg	Ala	Gly	
Ala	Asn 50		His	His	His :	His	40 Gly	His	His	Gly		45 His	Gly	Phe	Val	
Val 65	Arg	Glu	Thr .	Arg	Val (	55 Glu (	Glu	Asp	Ile	Asn	60 Thr	Cys	Thr	Gly	Glu	
	His	Glu .	Arg I		70 Glu :	Ser 1	Phe		Ala	75 Arg	Ala	Asn			80	
<211 <212 <213	> 11 > 22 > DNZ > Zea			- 0					90							
<400 gcac		gg ct	tact	acca	a gg											22

<2: <2:	10> 1 11> 1 12> 1 13> 2	19	mays													
	ggcgg		agti	tagco	cc											19
<21 <21 <21 <22 <22	0> 1> 0	348 ONA Oryza	a sat													
<22 <22	2> (	1)	_feat . (34 .,T,C		G											
			catc	acaa	.ca c	cacc	tcac	c tc	actc	ссса	act	aaaa	aac		g gct t Ala	57
cac His	tac Tyr	cag Gln 5	gag Glu	gtg Val	gac Asp	tac Tyr	tgc Cys 10	tcg Ser	gag Glu	gag Glu	gtg Val	agg Arg 15	Ser	gtg Val	acc Thr	105
ccc Pro	acc Thr 20	ggc Gly	ggc	ttc Phe	ctc Leu	ggc Gly 25	cgc Arg	ggc Gly	ggc Gly	gtg Val	cag Gln 30	cag Gln	cag Gln	cac His	gtc Val	153
gtc Val 35	aag Lys	gag Glu	acg Thr	ttc Phe	cag Gln 40	gag Glu	atc Ile	gac Asp	ang Xaa	tcc Ser 45	ggc Gly	tcc Ser	ggc Gly	cgg Arg	can Xaa 50	201
can Xaa	cac His	aac Asn	cac His	aac Asn 55	cac His	ggc Gly	aac Asn	gac Asp	tac Tyr 60	ctn Xaa	atg Met	gtg Val	cgc Arg	gag Glu 65	acc Thr	249
aag Lys	gtn Xaa	gag Glu	gag Glu 70	gac Asp	ttt Phe	aac Asn	acc Thr	tgc Cys 75	acc Thr	ggc Gly	gag Glu	ttt Phe	cgc Arg 80	gag Glu	cgc Arg	297
aan Xaa	aag Lys	gag Glu 85	ctt Leu	tcc Ser	tgc Cys	tna Xaa	agt Ser 90	ccg Pro	act Thr	tna Xaa	tcg Ser	aac Asn 95	ctg Leu	ctg Leu	tgt Cys	345
gta Val																348

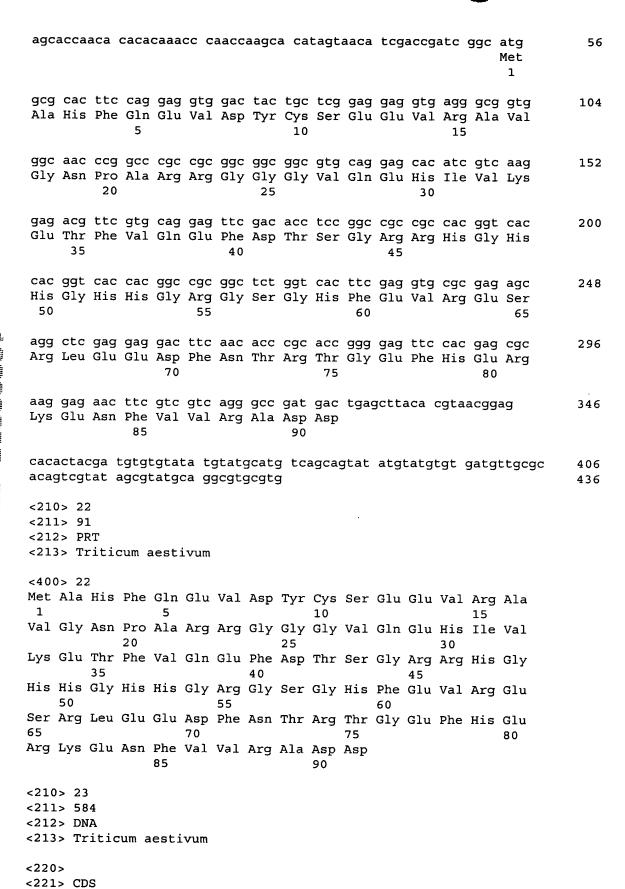
<210> 14 <211> 99

```
<212> PRT
<213> Oryza sativa
<220>
<221> VARIANT
<222> (1)...(99)
<223> Xaa = Any Amino Acid
<400> 14
Met Ala His Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser
Val Thr Pro Thr Gly Gly Phe Leu Gly Arg Gly Gly Val Gln Gln
His Val Val Lys Glu Thr Phe Gln Glu Ile Asp Xaa Ser Gly Ser Gly
Arg Xaa Xaa His Asn His Asn His Gly Asn Asp Tyr Xaa Met Val Arg
                       55
Glu Thr Lys Xaa Glu Glu Asp Phe Asn Thr Cys Thr Gly Glu Phe Arg
                   70
Glu Arg Xaa Lys Glu Leu Ser Cys Xaa Ser Pro Thr Xaa Ser Asn Leu
Leu Cys Val
<210> 15
<211> 591
<212> DNA
<213> Oryza sativa
<220>
<221> CDS
<222> (61)...(333)
<221> misc feature
<222> (1)...(591)
<223> n = A,T,C or G
<400> 15
60
atg get cac tac cag gag gtg gac tac tgc tcg gag gag gtg agg tcg
                                                                  108
Met Ala His Tyr Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ser
 1
gtg acc ccc acc ggc ggc ttc ctc ggc cgc ggc gtg cag cag cag
                                                                  156
Val Thr Pro Thr Gly Gly Phe Leu Gly Arg Gly Gly Val Gln Gln
            20
cac gtc gtc aag gag acg ttc cag gag atc gac agg tcc gqc tcc qqc
                                                                  204
His Val Val Lys Glu Thr Phe Gln Glu Ile Asp Arg Ser Gly Ser Gly
        35
                                               45
cgc cac cac cac aac cac agc aac gac tac ctg atg gtg cgc
                                                                  252
Arg His His His Asn His Asn His Gly Asn Asp Tyr Leu Met Val Arg
    50
                        55
                                           60
gag acc aag gtg gag gac ttc aac acc tgc acc ggc gag ttc cgc
                                                                  300
Glu Thr Lys Val Glu Glu Asp Phe Asn Thr Cys Thr Gly Glu Phe Arg
```

ga Gl	g cg u Ar	g L	ag ca ys Gi	ag a ln S	gc 1 er 1 85	ttc Phe	ctg Leu	ctc Leu	aaq Lys	s Se	c ga r As 0	c to	gatc	gaad	ec t	tgct	gtgtgt	353
tag	gcac	ctto	tto	cct	gtgo	ge	gcgi ttad	gcg	t gt gaa	gta	çgtg.	c gt	aca	cgga	g c	ctta	ıtggtgg ıgctaat ıaataat ıaaaa	
<2: <2:	10> 11> 12> 13>	91 PRT	a sa	tiva	a													
<40	00>	16																
-					)					חו						1 -	Ser	
			20						25	Arg		•		3	^	Gln	Gln	
		33						40					15	r G	ly		Gly	
	50					5	5				Asp	60						
					/ /	U					Cys 75		r Gl	у G	lu 1	Phe	Arg 80	
Giu	ALC	г г	s GI	n Se 85	r Pi	ne L	eu :	Leu	Lys	Ser 90	Asp							
<21 <21	0 > 1 1 > 5 2 > D 3 > T	24 NA	icum	aes	tivu	ım												
<220 <221	0> l> C	DS	(3															
<221 <222	L> m 2> (	isc_ 1)	feat . (52	ure 4)	G													
<400			, - , -		J													
caag	cact	tc	gacg	tcgo	ac	gggc	gct	gca	cac	agac	aca	cca	agcg	ıtcg	gc	acc	a atg Met 1	59
gct Ala	tac Tyr	tac Tyr	cag Gln 5	gag Glu	gte Val	g ga l As	c t p T	ac t yr C	gc i ys s	tcg Ser	gag Glu	gag Glu	gtg Val	agg Arg	j Se	cg q er V	gtg /al	107
gcc Ala	ccg Pro	gcc Ala 20	ggc Gly	ttc Phe	ggo Gl	c cg	9 н.	ac g is G 25	ga g ly (	ggc Bly	ggc Gly	gtc Val	cag Gln 30	cag Glr	g Ca	ac g is V	gtc /al	155
gtc a	aag	gag	aag	ttc	gaç	g ga	g gt	c g	ac a	ıcg (	gtc :	tca	cgc	gco	gg	ic č	icc	203

Val Lys Glu Lys 35	Phe Glu Glu 40	Val Asp Thr	Val Ser Arg Ala 45	Gly Ala
aac cac cac cac Asn His His His 50	cac cac cat His His His 55	ggt cac cac of Gly His His	ggc ggc cac ggc Gly Gly His Gly 60	ttc gtg 251 Phe Val 65
gtg cgc gag acc Val Arg Glu Thr	agg gtc gag Arg Val Glu 70	gag gac atc . Glu Asp Ile . 75	aac acc tgc acc Asn Thr Cys Thr	ggc gag 299 Gly Glu 80
gtc cac gag cgc Val His Glu Arg 85	agg gag agc Arg Glu Ser	ttc ctc gcc a Phe Leu Ala a 90	agg gct aac tga Arg Ala Asn	gccgccc 348
ggcggccggc atcca actggttgtg caagg ttacacaata rctcc	stcatc ntactte	ggct atcgtace	gts mascacters	tcctqtmcaa 468
<211> 94 <212> PRT <213> Triticum a	estivum			
<400> 18 Met Ala Tyr Tyr	Gln Glu Val A	Asp Tyr Cys S	Ser Glu Glu Val	Arg Ser
1 Val Ala Pro Ala (	5	10		15
20 Val Val Lys Glu		25	30	
35	4	40	45	<del>-</del>
Ala Asn His His 1 50	55		60	-
Val Val Arg Glu '	Thr Arg Val (		Ile Asn Thr Cys	Thr Gly 80
Glu Val His Glu				80
<210> 19 <211> 584 <212> DNA <213> Triticum as	estivum			
<220> <221> CDS <222> (46)(32)	1)			
<221> misc_featur <222> (1)(584) <223> n = A,T,C o	)			
<400> 19 aacgcacgaa acatac	cacaa aacccaa	agca catcagta		g cac ttc 57 a His Phe
cag gag gtg gac t	ac tgc tcg g	jag gag gtg a	gg gcg gtg ggc	tac ccg 105

5	Glu	Val	Asp	Tyr	Cys 10	Ser	Glu	Glu	Val	Arg 15	Ala	Val	Gly	Tyr	Pro 20	
gcc Ala	cgc Arg	cgc Arg	ggc Gly	tgc Cys 25	ggc Gly	ggc Gly	gtg Val	cag Gln	gag Glu 30	cac His	atc Ile	gtc Val	aag Lys	gag Glu 35	acg Thr	153
ttc Phe	gtg Val	cag Gln	gag Glu 40	ttc Phe	gac Asp	acc Thr	gcc Ala	ggc Gly 45	cgc Arg	cgc Arg	cay Xaa	ggt Gly	cac His 50	cac His	ggt Gly	201
cac His	cac His	ggc Gly 55	cgy Xaa	ggc Gly	tcy Xaa	ggt Gly	cac His 60	ttc Phe	gag Glu	gtg Val	cgc Arg	gag Glu 65	agc Ser	aag Lys	cts Xaa	249
														aag Lys		297
aay Xaa 85	ttc Phe	tcs Xaa	tcc Ser	aag Lys	gcc Ala 90	gat Asp	gac Asp	tra	sytwa	aac a	ayttı	mcgga	ac a	cact	acatg	351
tgca ancı	aagct itgaa	kc c aca g	cttyt gataa	tgg(	eg gs ne te	saaca	acco gtnnt	yat aaa	tygto aaaaa	gcsc 1ggg	cst ggc	tcaa cgta	cct :	taata atcg	tacctt aancct ctatat	411 471 531 584
<213 <212	0> 20 L> 92 2> PF 3> Tr	?	cum a	nesti	Lvum											
<213 <213 <213	L> 92 2> PF	e er eitic	cum a	nesti	vum											
<213 <212 <213 <400 Met	L> 92 2> PF 3> Tr 0> 20 Ala	e Titic His	Phe	Gln 5	Glu				10					Arg 15		
<213 <212 <213 <400 Met	L> 92 2> PF 3> Tr 0> 20 Ala	e Titic His	Phe	Gln 5	Glu				10					_		
<213 <213 <213 <400 Met 1 Val	l> 92 2> PF 3> Tr 0> 20 Ala Gly	e ettic His Tyr Glu	Phe Pro 20	Gln 5 Ala	Glu Arg	Arg	Gly	Cys 25	10 Gly	Gly	Val	Gln	Glu 30	15	Ile	
<213 <213 <213 <400 Met 1 Val	l> 92 2> PF 3> Tr 0> 20 Ala Gly Lys	e ET Titic His Tyr Glu 35	Phe Pro 20 Thr	Gln 5 Ala Phe	Glu Arg Val	Arg Gln Gly	Gly Glu 40	Cys 25 Phe	10 Gly Asp	Gly Thr	Val Ala His	Gln Gly 45	Glu 30 Arg	15 His	Ile His	
<213 <213 <213 <400 Met 1 Val Val Gly	l> 92 PF3> Tr 0> 20 Ala Gly Lys His 50	et Titio His Tyr Glu 35 His	Phe Pro 20 Thr	Gln 5 Ala Phe His	Glu Arg Val His Glu	Arg Gln Gly 55	Gly Glu 40 Arg	Cys 25 Phe Gly	10 Gly Asp Ser	Gly Thr Gly Arg	Val Ala His 60	Gln Gly 45 Phe	Glu 30 Arg Glu	15 His Arg	Ile His Arg His	
<213 <213 <213 <400 Met 1 Val Val Gly Glu 65	L> 92 PF B> Tr O> 20 Ala Gly Lys His 50 Ser	ettic Titic His Tyr Glu 35 His	Phe Pro 20 Thr Gly Leu Glu	Gln 5 Ala Phe His Glu	Glu Arg Val His Glu 70	Arg Gln Gly 55	Gly Glu 40 Arg Ile	Cys 25 Phe Gly Asn	10 Gly Asp Ser Thr	Gly Thr Gly Arg	Val Ala His 60 Thr	Gln Gly 45 Phe	Glu 30 Arg Glu	15 His Arg Val	Ile His Arg	
<213 <213 <213 <400 Met 1 Val Val Gly Glu 65	l> 92 2> PF 3> Tr 0> 20 Ala Gly Lys His 50 Ser Arg > 21 > 43 > DN > Tr > CD	entice of the second se	Phe Pro 20 Thr Gly Leu Glu	Gln 5 Ala Phe His Glu Asn 85	Glu Arg Val His Glu 70 Phe	Arg Gln Gly 55 Asp	Gly Glu 40 Arg Ile	Cys 25 Phe Gly Asn	10 Gly Asp Ser Thr	Gly Thr Gly Arg	Val Ala His 60 Thr	Gln Gly 45 Phe	Glu 30 Arg Glu	15 His Arg Val	Ile His Arg His	



<222> (46) ... (321) <221> misc feature <222> (1)...(584) <223> n = A, T, C or G<400> 23 aacqcacqaa acatacacaa aacccaagca catcagtaga tcggc atg gcg cac ttc 57 Met Ala His Phe 105 cag gag gtg gac tac tgc tcg gag gag gtg agg gcg gtg ggc tac ccg Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ala Val Gly Tyr Pro 10 gec ege ege tge gge gge gtg eag gag eac ate gte aag gag acg 153 Ala Arg Arg Gly Cys Gly Gly Val Gln Glu His Ile Val Lys Glu Thr 30 201 ttc gtg cag gag ttc gac acc gcc ggc cgc cay ggt cac cac ggt Phe Val Gln Glu Phe Asp Thr Ala Gly Arg Arg Xaa Gly His His Gly 40 cac cac ggc cgy ggc tcy ggt cac ttc gag gtg cgc gag agc aag cts 249 His His Gly Xaa Gly Xaa Gly His Phe Glu Val Arg Glu Ser Lys Xaa 55 gar gag gac atc aac acc cgc acc ggs gag ttc cac gaa cgc aag gga 297 Xaa Glu Asp Ile Asn Thr Arg Thr Xaa Glu Phe His Glu Arg Lys Gly 75 70 351 aay tto tos too aag goo gat gao trasytwaac ayttmoggac acactacatg Xaa Phe Xaa Ser Lys Ala Asp Asp tgtgtawatt mygsattcaa mattatatgt atgtktkatg ttkcccamat ccywtacctt 411 471 tgcaagetke ettyttggeg gsaacaacce yatygtgese estteaacet taataaneet ancntgaaca gataaactnc tgatagtnnt aaaaaaaggg ggccgtacca atcgctatat 531 qqtctttaqc cctncqqcqt cqttncactc tnctqqaaan ctggtacact tan 584 <210> 24 <211> 92 <212> PRT <213> Triticum aestivum Met Ala His Phe Gln Glu Val Asp Tyr Cys Ser Glu Glu Val Arg Ala Val Gly Tyr Pro Ala Arg Arg Gly Cys Gly Gly Val Gln Glu His Ile 25 Val Lys Glu Thr Phe Val Gln Glu Phe Asp Thr Ala Gly Arg Arg His 40 Gly His His Gly His His Gly Arg Gly Ser Gly His Phe Glu Val Arg Glu Ser Lys Leu Glu Glu Asp Ile Asn Thr Arg Thr Gly Glu Phe His Glu Arg Lys Gly Asn Phe Ser Ser Lys Ala Asp Asp

85 90

<210> 25 <211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide based upon an adaptor
 used for cDNA library construction and poly(dT) to
 remove clones which have a poly(A) tail but no
 cDNA insert.

<400> 25 tcgacccacg cgtccgaaaa aaaaaaaaa aaaaaa